

REMARKS

Of claims 1-41 previously presented, claims 11, 12, and 14 were withdrawn from consideration pursuant to an election requirement and claims 15 and 30 were previously canceled, leaving claims 1-10, 13, 16-29, and 31-41 for consideration on the merits. Applicants continue to assert that at least independent claims 1, 26, and 33 are generic. In view of the amendments and remarks presented herein, reconsideration and allowance of all pending claims are respectfully requested.

As an initial point, Applicants submit that the above-presented claim amendments are fully supported by the original specification. Independent claims 1, 26, and 33 are amended to more clearly describe the structure and operation of the collapse actuator. Specifically, the amended claims now specify that the detachable distal end of the collapse actuator is configured to assume a deformed profile solely in response to a sufficient proximal force applied to the collapse actuator, the withdraw profile permitting the detachable distal end to pass proximally through the distal aperture and thereby detach from the collapsed closure component. Support for this claim language is found in the specification as originally filed at page 9, line 23 through page 10, line 5 and Figs. 2-5. Accordingly, consideration and entry of these claim amendments are respectfully requested.

Turning to the Office action, claims 1-10, 13, 24-29, and 31-41¹ stand rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 5,964,782 ("Lafontaine") in view of U.S. Patent No. 6,270,515 ("Linden"). Applicants traverse this ground of rejection.

¹ The first sentence of paragraph number 2 on Page 2 of the Office action notes only these claims. The first underlined sub-heading below this sentence indicates a sub-set of rejected claims, some of which are not included in the previous sentence. Namely, claims 16-20 are listed in the first sub-heading but are not identified in the initial sentence. The Examiner does not include comments specifically directed to these claims, and therefore Applicants assume that the first sentence identifies the claims that are rejected. This interpretation is supported by the fact that a second rejection is asserted specifically against claims 17-23, with comments directed to the language of these claims. As a result, it does not appear that a prior art rejection has been asserted against claim 16, and therefore this claim is presumed to be allowable. Should the Examiner disagree, a further non-final Office action clearly addressing the subject matter of claim 16 is respectfully requested.

The proposed combination of Lafontaine and Linden fails to disclose or suggest a detachable distal end of the collapse actuator configured to assume a deformed profile solely in response to a sufficient proximal force applied to the collapse actuator as now specified in independent claims 1, 26, and 33. The Office action acknowledges that Lafontaine fails to disclose or suggest a collapse actuator, and relies instead on Linden for this claim element. Linden, however, discloses a septal defect closure device that includes a mesh sleeve 512 placed over an expandable balloon located at the distal end 522 of a catheter 520 (Col. 10, lines 57-60 and Figs. 17 and 18). As shown in Fig. 19, the balloon 524 is inflated after delivery to the defect site, allowing the mesh sleeve 512 to contact the septal tissue 505, as shown in Fig. 20 (Col. 10, lines 64-66). Also referring to Fig. 20, after deployment and attachment of the sleeve 512, the balloon 524 must be deflated before it can be removed from the site of the defect 506 (Col. 11, lines 12-14). Accordingly, the balloon 524 of Linden requires deflation before it can be removed, and therefore does not assume a deformed profile solely in response to a sufficient proximal force applied thereto, as specified in the current claims. Accordingly, the proposed combination of Lafontaine and Linden fail to disclose or suggest each element of the claims, and therefore the rejections based thereon must be withdrawn.

Claims 2-10, 13, 16-25, 27-29, 31-32, and 34-41 all depend directly or indirectly from independent claims 1, 26, and 33, and therefore, are patentable over the proposed combination of references for the same reasons presented above.

Claims 17-21 stand rejected under 35 U.S.C. §103(a) as obvious over Lafontaine in view of Linden, and further in view of U.S. Patent No. 6,334,865 ("Redmond").² Applicants traverse this ground of rejection.

Claim 17, as well as claims 18-21 depending directly or indirectly thereon, specifies that "the detachable distal end of the collapse actuator includes a deformable hook for releasably coupling the collapse actuator to the closure component." Accordingly, the deformable hook is

² The rejection as stated on page 3, paragraph number 3 indicates that Lafontaine and Linden are used "as applied to claim 16." As noted above, the Office action does not specifically address the language of claim 16. Accordingly, the rejection as stated fails to address each component of claims 17-21, and therefore is incomplete and should be withdrawn. Applicants, however, attempt to address the merits of the rejection in the following remarks.

initially coupled to the closure component, but is deformable to detach from the closure component. According to claim 1, from which claim 17 depends, deformation of hook results solely in response to a sufficient proximal force applied to the collapse actuator. Accordingly, the device as specified in claims 17-21 both collapses the closure component and separates the actuator from the closure component in response to proximal force applied to the actuator, thereby simplifying the vascular closure procedure.

The proposed combination of Lafontaine, Linden, and Redmond fails to disclose or teach each element of claims 17-21. Lafontaine and Linden are deficient for the reasons noted above. The Examiner cites Redmond for allegedly teaching the deformable hook specified in claims 17-21. Redmond, however, teaches the use of a barrier actuator 22 that is permanently coupled to a barrier 26. Accordingly, the connection end of the barrier actuator does not "releasably couple" the barrier actuator 22 to the barrier 26, and therefore is not responsive to the releasable collapse actuator.

More specifically, if one considers the barrier actuator 22 to be the collapse actuator and the barrier 26 to be the collapse backing, then it is evident that the barrier actuator 22 is not releasably coupled to the barrier 26 as required in the claims. Instead, as described in the Redmond specification, after hemostatic flowable material has been injected at the site, barrier actuator 22 is extended to move barrier 26 from the deployed configuration (collapsed) of Fig. 2 to the undeployed configuration (extended) of Fig. 1 (Col. 7, lines 9-13). Thereafter, the entire barrier assembly, including the barrier actuator 22 and barrier 26 are withdrawn from the tissue track, as shown in Fig. 5 (Col. 7, lines 14-15). Accordingly, the barrier actuator 22 of Redmond is not responsive to the deformable hook of the collapse actuator, which releases the actuator from the closure component. In turn, the proposed combination of Lafontaine, Redmond, and Linden fails to disclose or suggest each element of claims 17-21, and therefore, the obviousness rejection based thereon must be withdrawn.

As noted in footnote 1, the Office action does not address the language of claim 16, and therefore the purported rejection of this claim is improper and must be withdrawn. Applicants respectfully request a further communication from the Examiner either indicating the allowability of this claim or presenting new grounds for rejecting this claim, which would necessitate a further, non-final Office action.

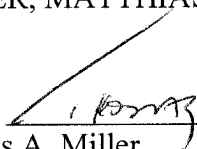
CONCLUSION

It is submitted that the present application is in good and proper form for allowance. A favorable action on the part of the Examiner is respectfully solicited.

If, in the opinion of the Examiner, a telephone conference would expedite prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,
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